



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/704,499	11/07/2003	Ivan V. Mendenhall	AAI-14306	4068

45483 7590 09/18/2007  
AUTOLIV ASP, INC  
Attn: Sally J. Brown ESQ  
3350 Airport Rd  
OGDEN, UT 84405

EXAMINER
----------

FELTON, AILEEN BAKER

ART UNIT	PAPER NUMBER
----------	--------------

1755

MAIL DATE	DELIVERY MODE
-----------	---------------

09/18/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/704,499

Applicant(s)

MENDENHALL ET AL.

Examiner

Aileen B. Felton

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address.--

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/25/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 39-71 is/are pending in the application.
- 4a) Of the above claim(s) 52, 53, 60, 67 and 68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 39-51, 54-59, 61-66, and 69-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Claims 52, 53, 60, 67, and 68 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election of species was made **without** traverse in the reply filed on 5/30/2006.

### *Claim Rejections - 35 USC § 102/103*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 39-51, 54-59, 61-66, and 69-71 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yamato (6,517,647).

Yamato discloses a gas generating composition which includes guanidine nitrate, 5-aminotetrazole, and basic copper or zinc nitrate(col. 3 and 4). The reference indicates in col. 3, lines 20-35, that the burning rate is increased when tetrazole derivatives are combined with basic metal nitrate. The claimed compounds are formed from the combination of 5-aminotetrazole and basic copper or zinc nitrate and thus these compounds would be present in the composition. Alternatively, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the claimed compounds present in the composition since they will form upon reaction of two compounds that are already present in the composition. It would have been obvious to one having ordinary skill in the art at the time the invention was made to vary the parameters of the gas generant composition to achieve a desired result. It is well-settled that optimizing a result effective variable is well within the expected ability of a person of ordinary skill in the subject art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

5. Claims 39-51, 54-59, 61-66, and 69-71 are rejected under 35 U.S.C. 102(b) as being anticipated by Mendenhall et al (6,143,102).

Mendenhall et al discloses a gas generating composition comprising 30-60 % of a fuel including combinations such as guanidine nitrate and tetrazole complexes of copper or zinc and 40-65 % of basic copper nitrate. The increase in burn rate is an inherent property of this composition. As to limitations which are considered to be inherent in a reference, note the case law of In re Ludke, 169 USPQ 563; In re

Art Unit: 1755

Swinehart, 169 USPQ 226, *In re Fitzgerald*, 205 USPQ 594; *In re Best et al*, 195 USPQ 430; and *In re Brown*, 173 USPQ 685, 688.

6. Claims 39-51, 54-59, 61-66, and 69-71 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamato (6,517,647) in view of Mendenhall (6,143,102).

Yamato discloses a gas generating composition which includes guanidine nitrate, 5-aminotetrazole, and basic copper or zinc nitrate (col. 3 and 4). The reference indicates in col. 3, lines 20-35, that the burning rate is increased when tetrazole derivatives are combined with basic metal nitrate. The claimed compounds are formed from the combination of 5-aminotetrazole and basic copper or zinc nitrate and thus these compounds would be present in the composition.

Mendenhall et al discloses a gas generating composition comprising 30-60 % of a fuel including combinations such as guanidine nitrate and tetrazole complexes of copper or zinc and 40-65 % of basic copper nitrate.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the compositions of Yamato and Mendenhall. It is prima facie obvious to combine two compositions, each taught for the same purpose to yield a third composition for that very purpose. *In re Kerkhoven*, 205 USPQ 1069, *In re Pinten*, 173 USPQ 801, and *In re Susi*, 169 USPQ 423. The increase in burn rate is an inherent property of this composition. As to limitations which are considered to be inherent in a reference, note the case law of *In re Ludke*, 169 USPQ 563; *In re Swinehart*, 169 USPQ 226, *In re Fitzgerald*, 205 USPQ 594; *In re Best et al*, 195 USPQ 430; and *In re Brown*, 173 USPQ 685, 688.

### ***Response to Arguments***

7. Applicant's arguments have been fully considered but they are not persuasive. Applicant argues that the references do not show the claimed compound being added to the gas generating composition. The Examiner disagrees. The components that react to form this compound are added to the gas generating composition and thus once added form the compound that is claimed. The claimed compounds are formed from the combination of 5-aminotetrazole and basic copper or zinc nitrate and thus these compounds would be present in the composition. The reaction is the same as that disclosed by Applicant and thus results in the same compound in the gas generating composition.

Applicants affidavit is not persuasive, first it is not commensurate with the scope of the claims. Second, the compound that is being added is formed in the reaction between 5-aminotetrazole and basic copper nitrate and thus would be present (and added) to the composition. See also ex 1 of Yamato which shows two components of the composition being mixed and then subsequently adding this mixture to the rest of the gas generating composition. Also, note that Mendenhall recites that: "Gas generant compositions containing both guanidine nitrate and such copper complex materials have been found to desirably provide significantly increased burn rates as compare to similar compositions but which do not contain such copper complex materials." This is the exact same effect that Applicant is currently claiming.

### ***Conclusion***

Art Unit: 1755

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aileen B. Felton whose telephone number is 571.272.6875. The examiner can normally be reached on Monday-Friday 6:30-4:00, except alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571.272.1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**AILEEN FELTON**  
**PRIMARY EXAMINER**